



Land & Air & Water

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Kentucky Environmental and Public Protection Cabinet

Land Air & Water

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Free compliance assistance available to all

By Rose Marie Wilmoth
Division of Compliance Assistance

Compliance assistance is not only the name of a division, it is also a service offered by the division.

Gene Harrison of the Division of Compliance Assistance (DCA) recently visited Louisville Forge & Gear in Scott County. The company had requested assistance in dealing with storm water that continually had a high solids content.

"I was pleased with the assistance from DCA," company official Chris Forte said. "Gene learned about the issue on site and said he would do some research and get back with us. I appreciated his honesty and the options he identified to solve our problem."

The Compliance Assistance Services Program helps regulated entities understand and comply with all environmental programs administered by the Department for Environmental Protection. The program is particularly interested in serving small businesses and communities that cannot afford to hire full-time environmental employees. Services include:

- Offering a toll-free compliance assistance hotline (800-926-8111) so an entity regulated by the department may seek compliance assistance;
- Responding to general information requests;
- Serving as an advocate for the compliance needs of regulated entities, particularly for small businesses and communities;
- Conducting sector and issue specific training; and
- Conducting on-site compliance assistance evaluations to help identify and correct compliance problems.

The division has responded to nearly 300 compliance assistance requests since October 2004. The top three areas of assistance requests have been related to the Brownfields Program, technical assistance and permitting. The division has been able to identify the sectors represented by approximately 50 percent of the callers. The top three sectors from which assistance has been requested are manufacturing, government, wastewater treatment and collection systems.

To request assistance from DCA, call toll free 800-926-8111. Information is also available from the DCA Web site www.dca.ky.gov



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on the cover

Laurel Creek in Elliott County. Photograph by Thomas G. Barnes, University of Kentucky, Department of Forestry.

Northern Kentucky VET Program ends

By Elizabeth Robb
Division for Air Quality

After operating for six years, the Vehicle Emission Testing (VET) Program in the northern Kentucky counties of Boone, Campbell and Kenton ended when the doors closed on Nov. 2, 2005.

Governor Ernie Fletcher signed an emergency regulation on Oct. 31, ending the northern Kentucky vehicle testing program and making the effective date coincide with U.S. Environmental Protection Agency's (EPA) approval of ending the program. The program originally began testing in September 1999, and approximately 600,000 tests on 200,000 vehicles have been administered since that date.

"Improved air quality in the last few years and our ability to use other options to reduce emissions in the area signaled the end of vehicle testing," stated Governor Fletcher during the signing of the regulation at a testing center in Boone County.

A vehicle emissions testing program was originally mandated for the northern Kentucky area in the mid-1980s. The area was in violation of the federal ozone standard and was listed as an "urban" nonattainment area, which triggered the requirement. In an effort to meet that requirement, a vehicle anti-tampering program was established in the mid-to-late 80s and was operated jointly by the three local county governments of Boone, Campbell and Kenton. The program had logistical and enforceability problems and never operated up to EPA expectations. It was disbanded shortly afterward, and the state began taking necessary actions to develop a program that would meet EPA requirements.

In the meantime, Congress was working on revising the Clean Air Act. After adoption of the 1990 Clean Air Act Amendments, all areas designated moderate nonattainment or above for the federal 1-hour ozone standard were required to have at least a basic vehicle emissions



ABOVE: Governor Ernie Fletcher stands in front of the vehicle testing facility in Boone County as he makes the announcement to end the VET program. **TOP:** Governor Fletcher signs the emergency regulation ending the vehicle emission testing program in northern Kentucky. Photos provided by Creative Services

testing program. This program could be counted as part of the area's mandatory 15 percent Volatile Organic Compound (VOC) reduction plan. The northern Kentucky counties were named as part of the Cincinnati/Hamilton Ozone Nonattainment Area, and the requirement to implement a vehicle emission testing program continued.

Throughout the early 1990s, the area went through periods of meeting the standard, only to receive subsequent violations before EPA could formally designate it as an attainment area.

In March 1997, EPA cited Kentucky for failing to implement a vehicle emissions testing program and for failing to develop a plan to reduce VOC emissions. EPA gave Kentucky 18 months to take the

appropriate actions or face losing federal money in the area. About this same time in early 1998, Kentucky also faced defeat in the 6th U.S. Circuit Court of Appeals, where the state had sued EPA to take the necessary actions to redesignate the area to attainment.

Finally after many years of appeals, Kentucky began a centralized, contractor-operated vehicle testing program in 1999 in Boone, Campbell and Kenton counties. The program was operated by Envirotest, with the Kentucky Division for Air Quality as the administrative oversight agency.

In 2004, both the Senate and House approved Senate Joint Resolution 3, directing the Environmental and Public Protection Cabinet to end the VET

Continued on Page 17

On Oct. 13, the Kentucky State Nature Preserves Commission (KSNPC) and Murray State University proudly announced the dedication of Murphy's Pond as an addition to the Obion Creek State Nature Preserve (SNP) in Hickman County. The 175.2-acre property, owned by the university since it was acquired with assistance from The Nature Conservancy in 1975, contains the highest quality bald cypress swamp remaining in Kentucky, as well as what is likely the highest concentration of cottonmouth snakes (*Agkistrodon piscivorus*) of any area in the state.

Combined with the existing preserve property which it adjoins, the preserve now encompasses a 1,577-acre mosaic of upland slopes and wetland communities, including shrub swamp, marsh and bottomland hardwood forest.



ABOVE: Marc Evans provided guided tours to guests of the event. Photo by Byron W. Brooks **BELOW:** The Murphy's Pond property encompasses upland slopes and wetland communities. Photo by Greg Abernathy

Ecological treasure added to nature preserves system

By Ron Scott
Kentucky State Nature Preserves Commission

According to KSNPC Director Don Dott, "The commission has long recognized Murphy's Pond as an incredibly important part of Kentucky's natural heritage, and we are delighted that the faculty and administration of Murray State, who have exercised careful stewardship of the area for the past 30 years, have demonstrated a commitment today to guaranteeing that this unique natural resource will be preserved for future generations to learn from and enjoy."

Dr. F. King Alexander, president of Murray State University, expressed similar sentiments. "The partnership that we have entered into today with the Kentucky State Nature Preserves Commission will not only help ensure that Murphy's Pond will continue to serve as a valuable living classroom and research facility but will also assure that the ecological integrity of the site will be forever protected," Alexander said.

"Murphy's Pond continues to offer our students and faculty a tremendous educational environment," Alexander said.

"This new designation as a state [nature] preserve grants many protections for decades to come for future students."

Following the dedication ceremony, held in conjunction with the commission's quarterly business meeting on the campus of Murray State, invited guests toured Murphy's Pond by canoe. KSNPC Senior Ecologist Marc Evans guided the group through the open water portion of Murphy's Pond, pointing out significant natural features along the way.

The university will continue to own the Murphy's Pond property, but this diverse wetlands complex will now receive the permanent legal protections afforded state nature preserves, along with expert land management assistance provided by the KSNPC staff. It will continue to serve as a valuable natural area for research and academic studies for Murray State, as well as others.

To visit Murphy's Pond, contact the university. Access to the rest of Obion Creek SNP requires written permission from the commission.

For additional information contact Joyce Bender at (502) 573-2886 or by e-mail at Joyce.Bender@ky.gov.



Are water quality and economic growth and development incompatible?

No, say the 45 professionals who have received training through the Kentucky Growth Readiness (KGR) component of the Commonwealth Water Education Project (CWEP). CWEP is a statewide adult education program to improve water quality in Kentucky.



Communities applaud launch of water quality program in Kentucky

Kentucky Growth Readiness Phase I helps communities make wise choices in land development.

**By Lee Colten and Rosetta Fackler
Division of Water**

Kentucky Growth Readiness is based on an existing program—Nonpoint Source Education for Municipal Officials (NEMO)—developed by the University of Connecticut Cooperative Extension Service. NEMO has been enthusiastically embraced by states across America as a way to help cities and towns grow while maintaining or improving water quality in

their watersheds. The KGR component employs information from the original program and from the Alabama and Tennessee programs as well as the Center for Watershed Protection.

KGR was developed because it is important for local officials, city planners, developers, builders, homeowners and the agricultural community to understand how water quality is affected by their choices in land use and development.

Developments that use impervious, or hard, surfaces present complex problems for water quality. Impervious cover prevents or limits ground water infiltration, thus increasing water runoff, which can lead to downstream flooding and scouring of stream channels.

As little as 10 percent impervious cover may cause measurable habitat alteration and water quality problems. Site design and best practices can minimize these problems, and some practices even save the developer money.



Kentucky Growth Readiness will assist citizens by teaching them:

- ✓ how land-use decisions affect water quality;
- ✓ how to comply with new regulatory requirements; and
- ✓ how to make informed decisions about managing growth.

Training for planning and public works officials includes information regarding how to build public awareness about land use and water quality issues and how to gain consensus for development rules that will benefit water quality.

Kentucky Growth Readiness was funded in part by a grant from the U.S. Environmental Protection Agency under §319(h) of the Clean Water Act through the Kentucky Division of Water to the University of Louisville. Significant support was provided by the Kentucky Environmental Education Council.

Nine presentations are currently available for viewing by specific audiences.

For more information on how you can improve water quality in your community without sacrificing growth potential, visit www.inyourwater.org. To request a presentation for your community or organization contact Kristen Dunaway at (502) 852-2693 or ksduna02@louisville.edu.

TOP: A high percentage of impervious cover can increase flooding, lower groundwater, prevent natural filtration, collect pollutants and move those pollutants to waterways faster. Photo by Cindy Schafer

LEFT: Grassy swales allow water to soak in and filter pollutants. Photo by Division of Water



KY EXCEL

Kentucky Excellence in Environmental Leadership

By Cheryl A. Taylor
Department for Environmental Protection

KY EXCEL is a new voluntary environmental leadership program that is open to all individuals, organizations, communities or businesses that commit and contribute to environmental excellence in Kentucky. It encourages innovation and aligns with other leadership efforts, state and federal, to maximize benefits to its members and the state. KY EXCEL is administered by the Department for Environmental Protection's Division of Compliance Assistance (DCA).

Membership Levels

Four levels are offered to meet the dynamic goals of a diverse membership:

Advocate—Open to all individuals and organizations that are interested in environmental stewardship and that support the goals of KY EXCEL through an annual project. Advocate members are typically nonregulated business sectors, trade associations, schools, environmental interest groups, consultants, communities and households.

Partner—Designed for regulated entities at the development level. Partners commit to at least one environmental improvement project annually.

Leader—Designed for regulated entities at the implementation level. They are actively involved in pollution prevention strategies and have integrated environmental stewardship into daily business operations. Leaders commit to at least three environmental improvement projects annually.

Master—Designed for regulated entities at the excellence level. They are models of environmental leadership and have integrated robust pollution prevention efforts into their daily operation, set aggressive continual improvement goals, and participate in community outreach activities. Masters commit to at least four

environmental improvement projects annually.

Environmental Improvement Projects

The commitment to and delivery of environmental improvement projects with established measures is the basis for KY EXCEL's successful support of a healthier environment for all Kentuckians. Projects can be developed from a diverse range of categories including:

- Conservation
- Educational and training activities
- Energy efficiency
- Financial support
- Mentoring and technical assistance
- Performance improvement
- Public health
- Restoration
- Waste reduction



Incentives

Incentives are designed to promote the mission of an improved environment for all Kentuckians and will vary based on membership level. Charter members will be invited to contribute suggestions to the incentives program currently under development. They may include:

- Public recognition
- Networking and partnerships
- Enhanced Environmental and Public Protection Cabinet services
- EPA national performance track dual membership (master level)

Membership Application

Applicants to KY EXCEL will complete an application and commit to performance goals through the DCA. Master, Leader and Partner applicants will also complete a voluntary self-assessment, an environmental policy statement and a plan for environmental management. All KY EXCEL members must agree to provide an annual report that summarizes results related to their environmental commitments from the previous year and to make new improvement commitments for the next one.

Contact Information

The Department for Environmental Protection hopes you will consider our invitation to become a member of KY EXCEL. Applications for its inaugural year will be accepted beginning January 2006. For additional information, contact Aaron Keatley, director of the Division of Compliance Assistance, at (800)-926-8111 or Cheryl Taylor, Commissioner's Office, at (502) 564-2150 or by e-mail at Cheryl.Taylor@ky.gov



Mark Stoller from General Electric talks with Cheryl Taylor of the Commissioner's Office about becoming a charter member of the KY EXCEL program. The Division of Compliance Assistance featured its KY EXCEL exhibit at the Governor's Conference on the Environment last fall.

Photo by Rose Marie Wilmoth, DCA

Mercury: fall haul is a success

By Eva Smith-Carroll
Division of Waste Management



TOP: Numerous household chemicals were collected during the fall haul in Madison County.

UPPER LEFT: Thirty-seven pounds of mercury, which can cause serious health problems, were brought in by citizens and Berea Hospital staff.

RIGHT: Madison County Solid Waste Coordinator Bob Rasmusson holds a mercury thermometer and old Butherin bottle filled with mercury that was collected over a period of years. Photos provided by Bob Rasmusson

Items turned in during a state-sponsored mercury collection drive in Madison County last fall illustrate how benign the material was considered in the past.

One man turned in several old envelopes labeled “Season Greetings.”

“A mercury thermometer was in each,” said Catherine Guess, an environmental technologist with the Kentucky Division of Waste Management (DWM).

Another participant brought in a Bufferin bottle filled with two pounds of mercury collected from old switches during his years of working at a factory with the idea that he could sell it, said Bill Burger, manager of the division’s Field Operations Branch. Recently the man had heard all the stories about how dangerous mercury is and wanted to get rid of it. He was apprehensive

about bringing in his stash because he mistakenly thought it was illegal to have that much mercury. He got a warm greeting and a mercury-free thermometer from Environmental and Public Protection Cabinet (EPPC) Secretary LaJuana S. Wilcher. “You’re the hero of the day,” Wilcher told him.

“One lady brought in a pill bottle one-third full of mercury and proceeded to tell us that she’s had it for around 30 years,” said Guess. “It seems she worked for a day camp in the summer and it was used there. The mercury was used for entertainment and to show how this liquid mercury could be split apart into little beads. The counselor would put it on a table and the kids would play with it.”

Mercury collection during Madison County’s Fall Haul Household Hazardous Waste Program was sponsored by the EPPC in conjunction with the Cabinet for Health and Family Services and the Education Cabinet and coordinated by DWM’s Field Operations Branch.

Thirty-seven pounds of mercury were collected including 72 thermometers, 19 manometers (pressure gauges), 28 thermostats and four containers holding several pounds of mercury. Berea Hospital brought in 16 manometers and now is mercury-free.

Division of Waste Management staff were on hand to survey participants and distribute educational material.

“The survey will help identify mercury sources and create a database,” said Wilcher. “The database will then be used to target sources across the state on the proper management of mercury. We also hope this pilot project can be used as a model for creating a statewide program for the collection and recycling of household hazardous waste.”

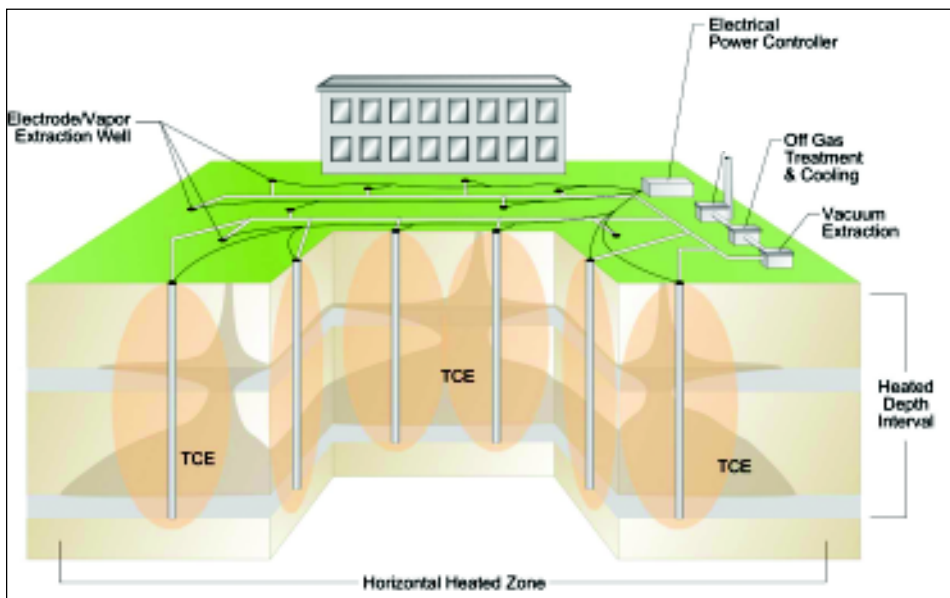
From 2000 to 2005, there were 73 mercury spills in Kentucky that involved federal or state response—including 19 spills in schools and another 19 in homes.

If not cleaned up properly, spills of even small amounts of elemental mercury, also called “quicksilver,” can have serious health consequences.

Mercury information is available by going online and accessing the Household Mercury Spills fact sheet at <http://www.waste.ky.gov/factsheets/> or by calling the Division of Waste Management at (502) 564-6716.



Agreement marks start of \$40 million groundwater cleanup



By Todd Mullins
Division of Waste Management

On Aug. 9, 2005, a major milestone was reached in the ongoing process of cleaning up contaminated groundwater at the Paducah Gaseous Diffusion Plant (PGDP).

On that day, representatives from the state Environmental and Public Protection Cabinet, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) signed and approved a Record of Decision to implement a \$40 million interim remedial action that will address subsurface source of Trichloroethene (TCE) and other volatile organic compounds present near the C-400 Cleaning Building. This source continues to fuel two very large groundwater contaminant plumes that flow northeast toward the Ohio River.

The plant, a federal EPA Superfund site, is the only operating uranium enrichment facility in the United States. The PGDP is owned by the DOE and leased and operated by the U.S. Enrichment Corp., a wholly owned subsidiary of USEC Inc.

The C-400 Building area is generally regarded as the most significant source of volatile organic contaminants to groundwater present at the PGDP. This facility was constructed early in the plant's history

to serve as the plant's primary parts cleaning facility. For decades, large quantities of TCE (a degreasing agent and probable human carcinogen) were used to clean parts and equipment. Over time, TCE leaked from the facility and entered the subsurface as a Dense Non-Aqueous Phase Liquid (DNAPL).

Trichloroethene DNAPL, being heavier than water, typically sinks after being spilled onto the ground or discharged into subsurface soils. As it sinks, it leaves residual traces of itself in the shallower soils. Eventually, it reaches a relatively impermeable geologic unit and begins to pool at the top of that unit.

If enough DNAPL collects in one location, its weight may allow it to continue into deeper units. This is what has occurred at the C-400 Building. Near this facility, DNAPL is known to be located within the shallower geologic deposits as well as at the bottom of a deeper gravel aquifer. Unless it is removed, it will continue to slowly dissolve into the surrounding groundwater, possibly causing contamination for several thousand years.

The remedial action to address subsurface contaminants is the most significant attempt to date to substantially curtail the PGDP's groundwater contamination problem.

The primary goal is to remove TCE



ABOVE: Ken LaPierre, EPA (left); Bill Murphie, DOE (right); and R. Bruce Scott, Kentucky Division of Waste Management (center), at the signing of the Record of Decision. Photo by Jim Ethridge for DOE

LEFT: An illustration of the heating system that will generate TCE vapor that will be collected or destroyed on-site. DOE illustration

DNAPL as deep as 100 feet or more beneath the surface. Once removed, it will no longer be able to continue to pollute the groundwater. It is hoped that this action will remove in excess of 90 percent of the TCE known to be present near C-400, thereby serving to significantly reduce the amount of time that the groundwater located beneath and north of the plant remains contaminated.

A heating system being designed and installed to remove TCE will pass electricity through numerous electrodes installed to depths of approximately 100 feet throughout the C-400 Building area. The electricity will heat subsurface sediments and groundwater above the boiling point of TCE. TCE vapor that is liberated from the ground by heat will then be extracted from the subsurface using vacuum extraction wells. This vapor will subsequently be collected or destroyed on-site.

Several steps remain before this interim remedy is fully functional. System design will require approximately one year with construction and operation occurring during the following three-year period. It is scheduled to be complete by 2010. ☒

In any serious discussion of water quality problems these days, the conversation inevitably turns to watersheds.

Those in the battle for water quality recognize that rivers and streams are impaired by more than the traditionally regulated—and far more visible—“point sources” of pollution such as the drainage pipes that spout from factories and treatment plants. Contaminants such as motor oil, grease, fertilizer and sediment are washed into our waterways by rain or melting snow rather than from any single, identifiable source.

“Simply controlling point sources of pollution will not get it,” LaJuana S. Wilcher, secretary of the Environmental and Public Protection Cabinet, told the Southeast Regional Watershed Roundtable in November.

To protect water quality, one must protect the entire watershed, Wilcher said. “It requires a holistic approach, attacking multiple pollution sources,” she said. “Watershed protection is not optional. Watershed protection is the only effective way to address our water quality problems.”

The roundtable, which drew about 175 people, had as its theme *Watershed Strategies for a New Era: Protecting the Environment and the Bottom Line*. It drew a myriad of partners from across the Southeast—state, federal and local government officials, citizen volunteers, engineers, planners and other water professionals.

In a keynote address, Wilcher, who once was the Environmental Protection Agency’s (EPA) assistant administrator for water, said EPA had at one time focused on the point sources of water pollution.

But “wet-weather” issues—rain and snow runoff—were being recognized, and the need for new approaches to water quality protection became apparent. EPA then began to move toward watershed management. Wilcher emphasized the power of the people, public servants and nonprofits in watershed efforts.

During the roundtable, participants heard 30 presentations on watershed, conservation and community strategies for improving water quality. Nineteen exhibitors and vendors from storm water companies, engineering and consulting



Roundtable empowers Kentuckians to protect their watersheds

By Kay Harker
Division of Water

firms, landscape architecture firms, state agencies and nonprofits showcased storm water technologies, monitoring techniques and environmental projects and programs to participants.

Five preroundtable workshops, which proved very popular, brought storm water technologies, capacity development and growth preparedness to attendees.

The Southeast Watershed Forum presented a workshop on Growth, Development and Water Quality in the Southeast, which provided tools for designing economically viable and watershed-friendly development patterns that can save communities money, reduce the cost of services and maintain property values.

Roundtable participants were also given the opportunity to tour several Bowling Green sites showcasing the management and treatment of storm water in a karst topography.

The workshop included a tour of several Bowling Green area sites to observe the management and treatment of stormwater in a karst topography. Photo by Corrine Wells

The World Wildlife Fund brought together grantees from the Southeast Rivers and Streams Support Fund to share experiences and lessons learned from the Tennessee, Cumberland and Mobile river basins.

Other speakers emphasized the link between a healthy environment and a vibrant economy. Division of Water Director David Morgan stated, “Economic development and environmental protection must grow together. You cannot have a healthy environment without a healthy economy and vice versa.”

Concurrent sessions included presentations on the cost of community services, storm water education, endangered species preservation, aquatic diversity, identifying critical partners involved in watershed efforts, use of citizen data in watershed efforts, forest conservation and restoration of various habitats.

Attendees had an opportunity to network with other organizations and agencies and to acquire new ideas for implementing watershed programs. The power of partnerships was evident in the roundtable itself and in the state breakout sessions.





Knifley Area Volunteer Fire Department Chief Jackie Perkins (left) and Department Secretary Tom Fisher accept the Firewise Communities USA award. Division of Forestry photo

Knifley honored as state's first firewise community

By Gwen Holt
Division of Forestry


The Knifley area in Adair County is the first community in Kentucky to be recognized as a Firewise USA Community. Knifley is among 126 communities nationwide to receive the special designation. Firewise is a national program created to reduce wildfire risks and hazards where urban development meets wild lands.

To receive Firewise Communities/USA recognition, local communities have to satisfy some rigorous requirements: complete a community wildfire assessment, establish a local Firewise council or task force, observe a Firewise Communities/USA day each spring, invest a minimum of \$2 per capita annually in local Firewise projects and submit an annual report.

The Knifley Area Volunteer Fire Department, which serves the communities of Knifley, Pellyton and Roley in Adair County, spearheaded this effort and worked hard to achieve this recognition. Volunteers established a Firewise Task Force, conducted a community-wide wildfire hazard assessment and developed a Community Wildfire Protection Plan. They also conducted several fire prevention programs and held a Firewise community breakfast to educate citizens about wildfire dangers. Local citizens are working together to implement the wildfire protection plan.

Leah MacSwords, director of the Kentucky Division of Forestry, presented the award to Fire Chief Jackie Perkins in a ceremony at the fire department in September. Knifley also received a plaque and two road signs to post in the community.

"We are very proud to present this distinguished recognition to the Knifley community. It exemplifies what communities can do if they work together to reach a goal. Their efforts have reduced the risk of wildfires and have made their community a safer place to live," MacSwords said.

The Firewise Communities/USA recognition program is part of the national Firewise Communities Program, which encourages local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters and others in the effort to protect people and property from the risk of wildfire. For information, visit www.firewise.org or contact the Kentucky Division of Forestry at (502) 564-4496. 

Membership changes in board announced

By Lisa Butler
Division of Compliance Assistance


New appointments to the Kentucky Board of Certification for Wastewater System Operators were recently announced by Governor Ernie Fletcher.

The members are Andrew S. Ernest, Ph.D., Western Kentucky University, who will serve as university representative; Randy E. Bingham, utility manager for London Utility Commission, and Gary W. Epperson, manager of operations for the city of Somerset, who will represent certified operators; and Larry G. Grubbs, Richmond Utilities, who will be representing city managers. Suzie Bradley was reappointed to represent certified operators.

The term for newly appointed members will expire on Aug. 31, 2009. These members will join Dennis Gumbert, David Pedigo and Don Wills on the board.

The Department for Environmental Protection welcomes the new members and looks forward to working with them. In addition, the department would like to extend sincere thanks to retiring members Terry Regan, Dr. Tom Begley, Mike Skaggs and Julia Thurman. They have served the citizens of the Commonwealth with dedication. Their combined experience on the board, in excess of 46 years, has been a significant contribution to Kentucky.

The Kentucky Board of Certification for Wastewater System Operators is an advisory board to the Department for Environmental Protection. The board members are appointed by the governor and serve four-year terms with the option of reappointment. The board holds business meetings at the Division of Compliance Assistance in Frankfort. These meetings are open to the public.

Additional information on the wastewater certification board may be obtained by visiting the division's Web site www.dca.ky.gov or by calling 800-926-8111 or (502) 564-0323. 

Kentucky EPPC personnel pitch in to help with hurricane relief

For days after Hurricane Katrina slammed the Gulf Coast, many Kentuckians were glued to their televisions in disbelief. How could those hard hit areas of Mississippi and Louisiana ever begin to recover?

Fortunately, several of our Commonwealth's finest packed their bags and traveled to the hurricane-ravaged states to assist in disaster recovery. Among them were 28 employees from the Environmental and Public Protection Cabinet (EPPC).

Staff from the Alcoholic Beverage Control, Division of Forestry and Division of Water went to different parts of the states hit hard by Katrina.

Allan Kidd, of the Division of Water's (DOW) Madisonville Regional Office, was among nine Kentucky public health environmental specialists working with the Mississippi Department of Health in Gulfport, Miss., to restore something most of us take for granted—clean drinking water.

Kidd's main task was to evaluate public water systems and assist with sampling of the operational systems within the three counties hardest hit along the coast. Almost all the systems inspected were incapacitated with no homes left to serve.

The systems were all groundwater wells, most of which had been compromised by saltwater and sewage. The well houses included large surface pressure or hydro-pneumatic tanks. Each steel tank contained more than 4,000 gallons of water, but were tossed like Styrofoam during the wave surge.

Kidd noted that photos and media coverage of Mississippi were inadequate to describe the extent of the destruction.

"I had the opportunity to talk with two individuals in Biloxi that endured the storm—one on the roof and the other in the attic of a two-story home. Their stories were intense," said Kidd. "On the coastline at Waveland I saw a young family of four staring at the footer where their home once stood," he said and adds,

"If you stand at ground zero and look around, the magnitude is just too great to capture on paper or film."

Bill Baker, supervisor of the Bowling Green Regional Office, joined a strike team which included several health inspectors, an administrative team and a pharmacist.

Baker said it took a couple of days to get over the shock and to try to comprehend the scale of the storm damage. "Try to imagine an 80-mile wide



ABOVE: *The Division of Water's Allan Kidd samples water from a newly established FEMA site near Gulfport, Miss.*

Division of Water photo

LEFT: *The Division of Forestry's Sarah Gracey had the opportunity to speak with President George W. Bush while on the relief mission.* *Division of Forestry photo*



set up in the area that supplied water for several mobile hospitals and showers as well as for drinking water.

"The experience makes you count your blessings and be thankful you have a home to go back to," Baker said. "I found the people of Mississippi to be tough, resilient, kind and appreciative as they try and start over and rebuild their lives."

Jason Gabbard, along with 15 other Kentucky Division of Forestry personnel, assisted the U.S. Air Force response crew. Part of the team was stationed at the New Orleans airport where disabled and injured evacuees were airlifted. Nearly all of the evacuees came on stretchers from a nearby hospital.

"In two and one-half nights and 12-hour shifts we were able to assist other crews, moving approximately 4,000 people and loading them onto military aircraft where they were transported to a different state or hospital," said Gabbard.

"This assignment was very difficult

tornado with a 30-foot flood in it," he said.

Baker spent most of his time in the small community of Pearlinton, located on the Mississippi-Louisiana line. Pearlinton and Waveland have no public water. All residents have their own wells. Many of the wells are artesian—the water comes to the surface and a centrifugal pump is used to supply water to the house. People lost their houses, and the pumps, motors and pressure tanks for their wells were submerged or displaced.

To get a Federal Emergency Management Agency (FEMA) trailer set up required establishing power, water and sewer. The Kentucky DOW team offered advice on disinfecting wells and taking bacteriological samples. Portable reverse osmosis and filtration water systems were



LEFT: ABC investigators provided security and traffic control at Red Cross distribution centers in Gulfport. ABC photo

LOWER LEFT: The Division of Water's Bill Baker stands by the remnants of the Hwy. 90 bridge from Waveland to Pass Christian.

Photo provided by Bill Baker

BELOW: Steve Turner of the Alcoholic Beverage Control surveys the damage in Gulfport. ABC photo



A special thanks to all those who dedicated a few weeks of their time to help those in need after the devastation of Hurricane Katrina.

**Dwayne Anderson
James Armstrong
Bill Baker
Charles Boswell
Jerry Brown
Dwight Cardwell
Robert Cremeans
Tim Crowell
Eric Eisiminger
David Fletcher
Jason Gabbard
Chet Gentry
Sarah Gracey
Mike Hale
Nathan Hall
Matthew Haywood
Allan Kidd
Robert Kinslow
Brandon Marshall
Edward McNeal
Christopher Nevins
Bryan Purvis
Jeff Smith
Jim Tipton
Bradley Trent
Steve Turner
Mike Vanover
Loren Wells**

for all of us. We weren't prepared or trained to see or do what we did, and at times we felt very helpless. However, I am very proud to have been a part of this crew and being able to help in a time of need," he said.

The Kentucky Office of Alcoholic Beverage Control (ABC) sent five investigators to provide law enforcement and relief support for two weeks in Mississippi. Jim Tipton, Chet Gentry, Bryan Purvis, Steve Turner and Loren Wells joined troopers from the Kentucky State Police and officers from Kentucky Motor Vehicle Enforcement in Gulfport.

The investigators assisted the Mississippi Highway Patrol with law enforcement activities in a five-county area and worked 12-hour shifts. By day they provided security and distributed

relief supplies such as food, water and clean-up materials to victims in outlying communities. By night they provided law enforcement for the same communities.

The ABC investigators also worked with the Red Cross, providing security, traffic control and relief at two distribution centers. The Red Cross was there to distribute emergency relief checks to the most devastated victims, and more than 2,500 families were processed and received assistance at these centers.

"Driving around Gulfport, Miss., and seeing uniforms from Indiana, Florida, Tennessee and Kentucky and more was amazing. You knew that all of these guys put everything that they had at home on hold just to come and help," said Chet Gentry. ❖



Representatives from many agencies and organizations participated in discussions at the Forestry Summit. (From left to right) Dr. Steve Bullard, chair of the University of Kentucky Department of Forestry; Bob Bauer, executive director of the Kentucky Forest Industries Association; Chris Will, secretary/treasurer of the Kentucky Association of Consulting Foresters and Dan Figert, Kentucky Department of Fish and Wildlife Resources. Photo provided by the Division of Forestry

Summit promotes the value of forests

By Gwen Holt
Division of Forestry

The Kentucky Division of Forestry hosted the Governor's Summit on Forestry in October at Shaker Village near Harrodsburg, Ky.

The first Forestry Summit was held in 1994. Since that time, the Environmental Quality Commission has convened a Forestry Roundtable to discuss changes to the state's forests and forest economy. The roundtable illustrated that much progress has been made, but more work is needed.

Summit participants representing many governmental and nongovernmental agencies, the University of Kentucky, professional and forest landowner associations and industry addressed these issues:

- How do we recognize and promote the full value of forests to Kentuckians and support meaningful options for economic development?
 - What are the critical information needs on which to base forest resource decisions, and how do we convey the importance of forests to the general public?
 - How do you bring the forestry message to cities and communities (from an urban and community forestry standpoint as well as bringing the rural forestry message to people who live in the cities)?
- Environmental and Public Protection Cabinet Secretary LaJuana S. Wilcher

opened the summit and challenged the participants to help Kentucky manage the state's forests in a sustainable manner.

Guest speakers at the summit included Texas Forest Service Director and State Forester Jim Hull and U.S. Forest Service Forest Resource and Environmental Issues Specialist John Greis.

Hull discussed the social and environmental benefits of forests and the potential for forest landowners to earn an income from the ecological services their forests provide. Greis presented information about southern forest economics and the importance of southern forest products to the global economy.

"We wanted to hear the ideas of others and to get their commitment to help us in our common goal of healthy, sustainable forests in Kentucky," said Division of Forestry Director Leah MacSwords. "I believe this summit is a first step in bringing forestry to the attention of the citizens of Kentucky."

A report summarizing participants' ideas and suggestions and a plan of action will be available soon.

Contact the division at (800) 866-0555 to request a copy of the report or visit the division's Web site at www.forestry.ky.gov and download the report from the News and Events Web page.

Forest fire prompts action from forestry employees and appreciation from grateful homeowners

The following e-mail was sent to the Division of Forestry.

To whom it may concern,

I would like to commend the forestry division for the phenomenal response during a fire around our home in Baxter, Kentucky.

On Friday evening, the forestry department informed us of a fire on the mountain, close to our home. While we had no idea of the fire, they were already planning how to proceed! They fought this fire for the rest of the night, and into the early morning hours of Saturday. They then returned on Saturday around 10 AM, and worked well into the evening hours once again.

Jack Estep, in particular, was so dedicated and skillful at his job. We so appreciated his communication with us concerning their plans to get the fire under control. While we know nothing about fighting fires, we know about the protection that we felt for our family, from the forestry department.

Thank you for the service you provide; as well as the risks you take to provide that service. The Magnani's will be forever grateful. Thank you all!

Robin and Steven Magnani
Baxter, Kentucky

How much do you know about drinking water standards?

By Jeff Grubbs
Division of Water

To stamp out devastating water-borne diseases like cholera and typhoid, in 1974 Congress established the Safe Drinking Water Act (SDWA) to protect drinking water quality in the United States. One of its major tools is setting health-based standards for drinking water.

What are drinking water standards?

There are both primary and secondary standards. The SDWA authorizes the Environmental Protection Agency (EPA) to establish safe standards of purity and requires all owners or operators of public water systems to comply with primary (health-related) standards. These are legally enforceable standards that protect public health by limiting the levels of contaminants in drinking water.

Secondary standards are nonenforceable guidelines regulating contaminants that may cause cosmetic effects such as skin or tooth discoloration, or aesthetic effects such as taste, odor or color, in drinking water. EPA recommends secondary standards to water systems but does not require compliance.

In 1974, health standards were determined for 19 contaminants. The 1996 amendments of the SDWA called for setting drinking water standards for 91 contaminants.

Drinking water standards apply only to public water systems. Homeowners with private wells or cisterns are not regulated by the SDWA. They should contact their local health departments for information on testing for bacteria and nitrates and how to protect their wells or cisterns from contamination.

How are drinking water standards set?

The procedure for setting a drinking water standard for a contaminant is extremely complex. Potential contaminants determined to pose a health risk

are placed on the national Drinking Water Contaminant Candidate List. As of February 2005, the list contained 51 potential contaminants for setting standards, including 42 chemicals and nine microbes. See <http://www.epa.gov/safewater/ccl/index.html>

EPA must first determine whether setting a standard is appropriate for a particular contaminant, and if so, what the standard should be. Science and data are used in an intensive technological evaluation, which includes occurrence in the environment, human exposure and risks of adverse health effects in the general population and sensitive subpopulations, analytical methods of detection, technical feasibility and impacts of regulation on water systems, the economy and public health. Public input occurs throughout the process.

MCLs and MCLGs

Before establishing an enforceable standard, EPA sets a maximum contaminant level goal (MCLG)—the level at which drinking water has known or anticipated adverse effects on health, allowing an adequate margin of safety. EPA also considers the risk to sensitive subpopulations (infants, children, the elderly and those with compromised immune systems). MCLGs are nonenforceable public health goals. Since they consider only public health and not the limits of detection and treatment technology, they sometimes are set at a level water systems cannot meet.

Once the MCLG is determined, EPA sets an enforceable standard. In most cases, the standard is a Maximum Contaminant Level (MCL), the maximum permissible level of a contaminant in the water delivered by a public water system.

The MCL is set as close to the MCLG as feasible. The Safe Drinking Water Act defines this as the level that

may be achieved with the use of the best available technology, treatment technique and other means that EPA finds are available, taking costs into consideration.

When no reliable method is economically and technically feasible to measure a contaminant at particularly low concentrations, a Treatment Technique (TT) is set rather than an MCL. A treatment technique is an enforceable procedure or level of technological performance that public water systems must follow to ensure control of a contaminant. Examples of TT rules are the Surface Water Treatment Rule (disinfection and filtration) and the Lead and Copper Rule (optimized corrosion control).

After determining an MCL or TT based on affordable technology for large systems, EPA must complete an economic analysis to determine whether the benefits of that standard justify the costs. If not, EPA may adjust the MCL for a particular class or group of systems to a level that maximizes health risk reduction benefits at a cost that is justified by the benefits. EPA may not adjust the MCL if the benefits justify the costs to large systems, and small systems unlikely to receive variances.

Setting drinking water standards is a complicated, time-consuming process that requires public input. It can take several years to gather the science-based data and set a standard before EPA can amend the regulations.

For more information on setting drinking water standards, see <http://www.epa.gov/safewater/standard/setting.html>

Where can I get a list of contaminants and the current drinking water standards?

For a list of drinking water standards and MCLs, see <http://www.epa.gov/safewater/mcl.html> or call the Drinking Water Hotline at (800) 426-4791.



AML hits grand slam at Spewing Camp Branch

By Linda Potter

Department for Natural Resources

It hardly looked like a prize winner: a ruined hollow gorged with 7 million cubic yards of coal waste – enough to cover 42 football fields in 100 feet of gray muck.

But the refuse dump at Spewing Camp Branch, once one of the worst abandoned mine sites in Kentucky, is now a model of reclamation. The site, in southern Floyd County, earned the federal Office of Surface Mining's highest reclamation award – the National Award for Outstanding Reclamation – for the Kentucky Division of Abandoned Mine Lands (AML) in September 2005.



TOP: *The Spewing Camp Branch now epitomizes how a reclaimed site should appear—lush grasses and properly filled drainage ditches that prevent erosion. ABOVE (left and right):* *These images show the site filled with millions of yards of coal waste, which caused flooding and pollution problems for area residents.* AML photos

“Every state AML agency and all OSM offices in the country vote on this award,” Division Director Steve Hohmann said. “To be recognized as outstanding by your peers is especially meaningful.”

The AML project earned two other awards from OSM – a People's Choice Award and the Appalachian Regional Award for Outstanding Reclamation.

From 1952 through 1973, Island Creek Coal Co. filled the hollow at Spewing Camp Branch with waste from its coal preparation plant on the other side of

the mountain. The refuse pile eventually stretched a half mile from the top of the mountain to the creek below. It was nearly 1,000 feet wide and 165 feet deep in some places. Local residents suffered flooding and pollution and saw the creek run red from contaminants.

Spewing Camp Branch began attracting attention from federal and state officials after the 1972 Buffalo Creek disaster, in which a coal waste dam collapsed in West Virginia, unleashing a black-water torrent that killed 125 people.

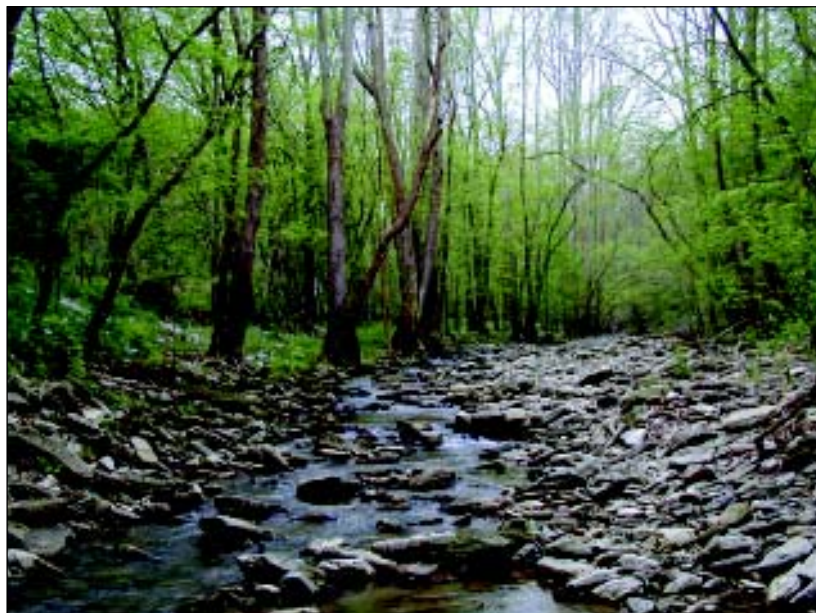
Federal and state officials feared that refuse from the dump in Floyd County could slide into Spewing Camp Branch to create an impoundment that also would fail one day, causing catastrophic flooding.

Consequently, Island Creek Coal Co. was required to blast a new creek channel away from the dump, divert the stream flow and regrade the refuse pile. Afterward, Island Creek abandoned the site in 1981.

Continued on Page 16

Implementing Kentucky's antidegradation policy

By Maleva Chamberlain
Division of Water



Jack's Creek in Madison County has an exceptional macro-invertebrate community. Photo by Mike Compton

Making the nation's waters "fishable and swimmable" is the goal of the Clean Water Act. To achieve this goal, the U.S. Environmental Protection Agency (EPA) requires states to:

1. Set designated uses for each stream or river. Kentucky has established six designated uses—Warm Water Aquatic Habitat, Cold Water Aquatic Habitat, Primary Contact Recreation, Secondary Contact Recreation, Outstanding State Resource Water and Domestic Water Supply. There are also criteria for the protection of human health from consumption of fish tissue. The designated uses of a water body can be found in 401 KAR 5:026.
2. Set water quality standards for these streams to meet their designated uses. Kentucky's water quality standards can be found in 401 KAR 5:031.
3. Establish a policy prohibiting the degradation of water quality. Kentucky's antidegradation policy can be found in 401 KAR 5:029 and 401 KAR 5:030.

An antidegradation policy is intended to require dischargers to demonstrate the socioeconomic importance of an activity if it will result in degradation of high-quality waters.

Kentucky's antidegradation policy was approved by the EPA on April 12, 2005. It places water bodies into categories, or tiers, and allows dischargers a choice of accepting more stringent permit limits or performing the socioeconomic demonstration when discharging to exceptional and high-quality waters.

Anyone who intends to discharge anything to any water body must have a Kentucky Pollutant Discharge Elimination System permit. The "tiers" and implications for permitting are:

- Impaired Waters—Surface waters categorized as impaired are assessed as not fully supporting any applicable designated uses.

All existing uses (those attained in the water body on or after Nov. 28, 1975) and the minimum level of water quality for those uses must be maintained and protected.

- High-Quality Waters—Any surface water not

categorized as an outstanding national resource water or an exceptional water or an impaired water is, by default, categorized as a high-quality water. The majority of waters in the Commonwealth are categorized as high-quality waters. In these, water quality exceeds the mandatory minimum levels to support the Clean Water Act's goals of propagation of fish, shellfish and wildlife, and recreation in and on the water (the "fishable and swimmable" goals).

Discharges are required to meet limits that would maintain and protect their existing uses.

- Exceptional Waters—These include any surface water designated as a Kentucky Wild River, designated as an outstanding state resource water as set forth in regulation, containing a fish community rated as excellent, containing a macroinvertebrate community that is rated as excellent or included in the Environmental and Public Protection Cabinet's reference reach network.

There are 217 surface waters listed in regulation as exceptional waters.

Discharges to exceptional waters are required to meet stringent limits, above and beyond those required for high-quality waters.

- Outstanding National Resource Waters —Water bodies must meet specific requirements for this listing. They include the Red River between mile points 49.2 and 68.6 in Menifee and Wolfe counties, the Underground River System within the Mammoth Cave National Park boundary in Edmonson, Hart and Barren counties and Big South Fork between mile points 45.0 and 55.2 in McCreary County.

No new or expanded discharges are allowed to these waters. A temporary discharge might be approved if there would be no demonstrable impact on the ability of the water to support its designated uses.



Cost share project deals with horse muck

By Linda Hunter
Division of Conservation

Once-rural counties throughout Kentucky are growing into major population centers. Kentucky's horse industry is still alive, well and growing, and the conservation districts in Boone, Campbell and Kenton counties recognized the need to educate horse owners about water quality problems and being better conservation partners.

Last summer marked the completion of an environmental grant applied for by the three northern Kentucky conservation districts. The grant, offered through the Kentucky State Cost Share Program, helps improve water quality in these counties.

The three-county area has more than 5,600 horses, many concentrated in boarding stables on limited acreage. The districts' goal was to educate, demonstrate and seek funding to create waste management options and to help owners focus on their land resources.

The districts jointly applied for a state cost share environmental grant in the amount of \$7,500 using the funds for two \$2,500 demonstration projects and a multilevel education program.

The first demonstration project included woodland fencing to prevent the destruction of trees and to prevent erosion; pasture improvement by overseeding with clover and fertilizing; and temporarily fencing of ponds.



One of the horse muck bins built at the demonstration site.

Photo by the Division of Conservation

The second project included the installation of two watering facilities running from a cistern to the pastures that enabled a rotational grazing system with four paddocks and temporary fencing for the pond.

After the projects ended, a tour was given that attracted more than 80 participants. The tour was recorded by the Community Program Center for airing on public television. It will also be used for future conservation district training projects.

Educational materials were distributed that were especially developed for the tour, and additional copies are available through the districts upon request.

The horse muck project was a great success. The Boone County Conservation District featured horse muck management at its county fair last year, and the cooperative extension service intends to hold a seminar this winter where pasture and muck management and conservation planning will be discussed. The Campbell County Conservation District and county extension service will also present a "horse college" program to discuss muck and pasture management options for conservation.

All three districts plan to apply for upcoming implementation grants to help landowners install needed heavy-use areas, rotational grazing and other conservation management practices.

The total investment of time and materials was \$19,859. A lot of hard work, as well as staff and district hours, was spent to make it worthwhile.

Farmer finds that animal waste pays

By Kim Richardson
Division of Conservation

With 1,300 horse farms and 1.1 million head of beef cattle calling Kentucky home, one might begin to wonder, where does all that manure go? Without proper treatment Kentucky could have a large amount of water contamination. But thanks to innovation, many farms are finding not only an alternative to possible water contamination but also an alternative income.

Since the tobacco program ended in 2005, many farmers are scrambling to replace their burley income. One farmer is turning cattle and horse waste into nutrient rich compost and a supplemental income.

Stewart Hughes, owner of Triple J Farm in Georgetown, has turned the waste from his beef cattle confinement operation, plus additional horse muck from surrounding farms, into Triple J Compost. Hughes sells the excess compost from his farm to customers in 15-pound or 40-pound bags. The rest is used on his farm. According to his nutrient management plan, Hughes has eliminated his need for commercial fertilizers and found that weed invasion was greatly reduced on land treated with the compost.

The idea is quickly catching on. Twenty people attended a compost workshop sponsored by the Thoroughbred RC& D Council at the Scott County Cooperative Extension Building last year. Hughes, along with Mike Bonford from the Kentucky State University Community Research on High Value Crop Production, and Bonnie Reid, a horticulturalist with Wind Star Farm LLC, participated in a panel discussion at the workshop.

Wind Star LLC is one of many horse farms in central Kentucky trying out this innovative idea. Other farms include Three Chimneys, Overbrook and Judd Mont.

As Carolyn Oldfield, director of the Thoroughbred RC&D, would say, "Since Kentucky is the horse capital of the world, shouldn't it be the compost capital of the world?"

AML hits grand slam at Spewing Camp Branch *Continued from Page 13*

Once abandoned, the site began to deteriorate rapidly. Coal sediment washed into the stream, clogging the creek channel and polluting water for more than a mile. Residential property and the county road flooded frequently, and contaminated water discharges, estimated at 50 gallons per minute, polluted Spewing Camp Branch all the way to its confluence with the Left Fork of Beaver Creek.

Enerpro Inc. permitted the refuse site in the late 1980s and attempted to extract coal remaining in the waste. The reprocessing effort ultimately failed and the site was again abandoned. By 2000, the Spewing Camp Branch refuse dump had developed overwhelming erosion problems. Gullies formed, 15 feet deep. Runoff filled the creek with black sediment. Substandard water from the site continually tainted the 1.5 miles of Spewing Camp Branch and the Left Fork of Beaver Creek. The site was void of vegetation, and numerous slides developed on the surface.

A forest fire in 2001 ignited the top portion of the refuse material, raising fears that fire would gradually spread over the entire fill, generating noxious fumes and smoke that would endanger the people who lived nearby. Additionally, open mine portals near the dump posed a threat to public safety.

The AML division began design work in 2001 on a stable, long-term solution for the dump. The sheer volume of coal refuse on a 2,500-foot slope was challenge enough. But high on the slope was an acre of waterlogged refuse more than 100 feet deep. The design team used a unique geogrid filter fabric in combination with crushed limestone aggregate to create a sump to collect surface water. The drying effect allowed for grading and covering the slopes. Three open portals were closed with bat-accessible gates. Two sediment ponds were drained and covered. Large rock-lined ditches had to be designed for runoff control.

Two other AML projects nearby involving reclamation of landslides yielded the 350,000 cubic yards of cover material needed for the Spewing Camp Branch site. The AML division estimates that doing the three projects together

rather than separately saved \$240,000 in construction costs.

Hawkeye Construction LLC, of Robinson Creek, Ky., submitted the lowest of four bids on the projects—\$3.66 million. Construction began in October 2002 and was completed two years later, with a final inspection on Sept. 15, 2004. The total project, including landslide sites, cost \$3.53 million, which was below budget.

Funding for the Spewing Camp Branch refuse project came from four sources. Kentucky's federal AML grant contributed \$2.1 million, and the Appalachian Clean Streams Initiative made available by OSM added \$723,297. The AML division contributed \$406,665, and \$296,100 came from a reclamation bond forfeited by Enerpro.

In addition to environmental and safety hazards abated at the dump, water quality has improved and people living downstream no longer suffer flooding from coal waste eroding into the creek.

"It's 100 percent better," said Roland Howell, a longtime Spewing Camp resident who worked for years at the refuse fill area when it was active. "There's no slate or black water in the creek during rains now. Fish may come back into the branch."

The Spewing Camp Branch project demonstrates the creativity, talent and diligence that characterize the staff of the Kentucky Division of Abandoned Mine Lands. Hohmann emphasizes that the gargantuan accomplishment was a joint effort on every level.

"I am thankful that I had the support from my superiors, and a dedicated staff who vigorously attacked the many challenges of this project," Hohmann said. "They worked tirelessly with the contractor to get the job done quickly, efficiently and ferreted out every opportunity to save money along the way."

In reclaiming the Spewing Camp Branch refuse site, the AML team eliminated one of the most visible scars caused by past mining practices.



Health care providers and drinking water

By Jeff Grubbs
Division of Water

A 2003 Gallup Poll commissioned by the U.S. Environmental Protection Agency (EPA) revealed that almost 80 percent of Americans have more confidence in and trust more the information they receive from health care providers than from their local water companies.

To help doctors, nurses, local health officials and other health professionals who play an important role in preventing waterborne illness provide that trusted information to patients, a new drinking water video for health professionals is now available from EPA.

"Tap Into Prevention: Drinking Water Information for Health Care Providers" is a continuing education video explaining potential health risks from exposure to microbial and chemical contaminants in drinking water and demonstrating actions health care providers can take in their practices.

The video features doctors, nurses and local health officials who discuss the connection between drinking water and health in their communities.

The video was created by the Centers for Disease Control and Prevention (CDC), the CDC's Agency for Toxic Substances and Diseases Registry and EPA who jointly cosponsor this continuing education activity.

It is available online at <http://www.epa.gov/safewater/healthcare/> or call the Safe Drinking Water Hotline at (800) 426-4791.

Be sure to download or ask for the supplemental materials for the video when you order. See the 2003 Gallup results of the EPA-commissioned Drinking Water Customer Satisfaction Survey at: http://www.epa.gov/safewater/consumer/pdf/survey_gallup_customersatification2003.pdf



On-site wastewater system improves water quality at Lewis Mobile Home Park

By Rosetta Fackler
Division of Water

Approximately 187 miles of streams in the Upper Cumberland River Basin are impaired because of pathogens, primarily from failing septic systems and “straight pipes,” which take wastewater directly from a residence to a stream with no treatment.

Forty percent of Kentucky’s households rely on septic systems and other on-site systems for wastewater treatment, according to a 1999 Environmental Quality Commission report, and in 36 Kentucky counties, fewer than 25 percent of the housing units are connected to public sewers. A significant number of those systems do not function properly, dumping poorly treated wastewater into groundwater and area streams.

the septic tank effluent from the 36 residences in the mobile home park. Treated wastewater will be dispersed into the soil through a pressurized drip irrigation system, one of many technological advances that have been used in the project.

Participants in the project are eagerly anticipating results of future water quality monitoring in Crummies Creek.

“The Upper Cumberland River On-site Wastewater Project provided the Harlan County Conservation District with the opportunity to provide sewage treatment to a community that would not have been possible otherwise,” said David Howard,

Conservation, U.S. Natural Resource Conservation Service, Harlan County Cooperative Extension Service and Kentucky Division of Water. It was funded through the U.S. Environmental

Protection Agency’s Nonpoint Source Pollution Control Grant program.

For more information on this project, to join the Upper Cumberland River Basin Team or to receive information on 319(h) grants, contact Rob

Miller at robertl.miller@ky.gov.



RIGHT: Installation of two 5,000 gallon septic tanks and one 8,000 gallon recirculating tank will help to treat the effluent from the 36 residences at the mobile home park.

ABOVE: A sign placed at the project site informed area residents of the new wastewater treatment technologies. Photos provided by Susie Mavinidis, USDA



A community alongside Crummies Creek in Harlan County, along with a group of federal, state and local agencies, hopes a new on-site wastewater treatment system at the Lewis Mobile Home Park will begin to make a difference in water quality. The community has long had inadequate wastewater treatment, contributing to the pathogen problems in Crummies Creek.

The new decentralized system consists of a recirculating media filter that will treat

Harlan County District Conservation supervisor. Rob Miller, Upper Cumberland Basin Coordinator agrees. “All in all this is a total win-win, providing wastewater treatment to the community and helping to improve the waters of the watershed,” Miller said.

Partners in the project included the Cumberland Valley Resource Conservation and Development Office, Cumberland Valley District Health Department, Harlan County Fiscal Court, Kentucky Division of

Northern Kentucky VET Program ends

Continued from Page 1

program and submit a revised Kentucky State Implementation Plan (SIP) to EPA.

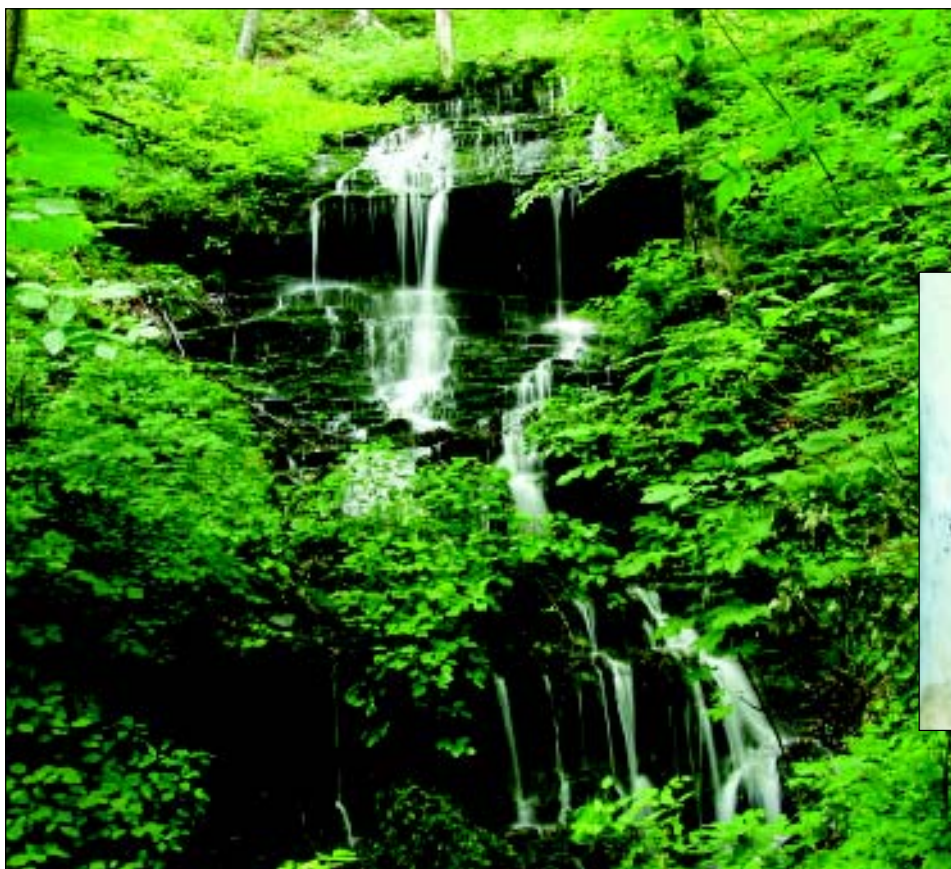
However, EPA requirements would not allow the program to merely be eliminated. Kentucky had to adopt other measures to reduce emissions to compensate for ending the program.

The Division for Air Quality worked with EPA to develop a plan to implement programs that would be approvable and would provide emission reductions.

Kentucky adopted regulations to require the use of a lower vapor pressure solvent for metal cleaning operations and to require high-volume, low-pressure spray guns at commercial auto body painting operations. Those regulations were adopted early in 2005.

Kentucky submitted the proposed SIP revision to EPA on Feb. 9, 2005. EPA approved Kentucky’s submittal, publishing the notice in the Federal Register on Oct. 4, 2005, with the effective date of the action being Nov. 3, 2005.





Trespassers punished after breaking into Carpenter Cave

By Joyce Bender
Kentucky State Nature Preserves Commission

Trespassers got more than they bargained for during a late-night jaunt into Carpenter Cave in Allen County. Land-owner John Newman called the sheriff after the alarm in his home alerted him to trespassers in the cave located in the ravine below his house. Conservation officers Brett Zalla and Robert Olds from the Kentucky Department of Fish and Wildlife Resources responded to the call and went into the cave with Newman to catch the intruders.

Carpenter Cave is a maternity cave for the federally endangered gray bat. Newman and his wife, Jane, have been vigilant protectors of the bats and their cave.

Population numbers for gray bats using the cave increased from 700 in the 1990s to 11,000 by 2001.

Not content with posting signs indicating the cave's protected status,

Newman, a retired electrical engineer, designed a warning system that plays a recording that tells intruders to vacate the cave.

Another system he designed trips the alarm that sounds in his home. Both are activated by light. In case the technology is not enough, in June 2004, the Newmans donated a conservation easement on 14 acres to the Kentucky State Nature Preserves Commission (KSNPC) to ensure the cave is protected long beyond their ownership.

Four local men were arrested and charged with criminal mischief and first degree criminal trespassing. They destroyed Newman's voice warning system and ripped signage from the ground. Fortunately, that was the extent of the damage. The defendants could have faced federal charges had there been proof of harm to any of the bats.

The young gray bats were already capable of flight when this illegal entry was made. Earlier in their lives, the intrusion could have been fatal for helpless young bats, which can be dropped when their mothers fly around in agitation after being disturbed.

At the hearing, the defendants were ordered to pay the Newmans \$1,000 restitution for the alarm they destroyed. They were given three-month jail terms, probated for two years.

The KSNPC extends thanks to officers Zalla and Olds for their good work in catching the men.

Getting to Carpenter Cave is not easy, especially in the dark. The cave's entrance is in a steep ravine along a cliff line, and it is easy to lose one's footing. The officers risked injury to protect an element of Kentucky's rich biodiversity that does not generate a lot of popular compassion. The commission appreciates the Newmans as well for their dedication to protecting the cave and its inhabitants and for the ingenious methods they have employed to help stack the deck a little more in the bats' favor.



ABOVE LEFT: *Carpenter Cave is a maternity cave for the federally endangered gray bat.* Photo by John Newman

ABOVE RIGHT: *The gray bat has experienced a major explosion in population since the 1990s.* Photo by John R. MacGregor

Awards

Oldham County students finish second in event

By Martin Bess
Division of Conservation

Every year, the national FFA convention draws young adults from around the nation who share an eagerness for leadership and careers in the science, business and technology of agriculture.

More than 50,000 members attended the 2005 convention.

A team of students from Oldham County High School in Buckner, Ky., placed second in the National FFA Environmental/Natural Resources Career Development Event. Team members were Brittany Nicole Pearson, Brett Hatfield, Dennis Wright and Kyle Melton. Coaching the team was Boyd Johnson.

The National FFA Environmental and Natural Resources Career Development Event provides competitive activities that allow students to apply classroom knowledge to real-life situations. The event tests students' problem solving and decision making skills in environmental and natural resources. Specific areas of concentration are soil profiles, water and air quality, waste management, environmental analysis and ecological succession. The event is one of many educational activities at the National FFA Convention in which FFA members practice the lessons learned in agricultural education classes.

The top 11 individuals and the national winning team members received scholarships to further their education at a post-secondary institution of their choice.

The Environmental and Natural Resources Career Development Event is sponsored by Tyson Foods Inc. of Springdale, Ark., and the USDA Natural Resources Conservation Service of Washington, D.C. as a special project of the National FFA Foundation.

The event is coordinated by the Kentucky Division of Conservation,

conservation district supervisors and employees, USDA Natural Resources Conservation Service, Department of Fish and Wildlife Resources, Division of Forestry, Kentucky Farm Bureau Federation, Cooperative Extension Service and others.



Oldham County team members (left side, front to back) Brett Hatfield, Nicole Pearson (right side, front to back) Kyle Melton and Dennis Wright. Division of Conservation photo



Drinking water systems receive awards

By Maleva Chamberlain
Division of Water

Public water systems throughout Kentucky work diligently to provide the state's citizens with safe and reliable drinking water. Nine drinking water systems have won awards in three different competitions.

Partnership for Safe Water

The Louisville Water Co. and Kentucky American Water were among 92 systems in 33 states recognized by the Partnership for Safe Water for commitment to providing superior water quality to customers.

The Partnership for Safe Water is a voluntary initiative for optimizing surface water treatment plant performance. Water systems in the partnership go through as many as four phases of the program with an emphasis on improving the performance of their treatment process at each stage. The Louisville Water Company and Kentucky American Water received the Director's Award for systems completing Phase III, the Self-Assessment and Peer Review phase. Sponsors include the U.S. Environmental Protection Agency (EPA), American Water Works Association and the American Society of Drinking Water Administrators.

Outstanding Service to the American Water Works Association (AWWA)

The London Water Treatment Plant (small plant), Hardin County Water District #2 —White Mills Water Treatment Complex (medium plant) and Henderson Water Utilities — North Water Treatment Plant (large plant) have received awards for outstanding service to the AWWA. The awards recognize and honor members of the AWWA who have demonstrated outstanding service to the association through leadership and active participation in AWWA programs.

Michael Perry of the Frankfort Plant Board received the Operator's Meritorious Service Award in recognition of special performance.

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Small businesses win air quality awards

By Rose Marie Wilmoth
Division of Compliance Assistance

In October, two Kentucky small businesses were recognized for going above and beyond regulatory requirements to reduce the impact of their operations on the state's air quality. Both companies foster the ethic of air quality stewardship that brought about the establishment of the award eight years ago.

The Small Business Air Quality Stewardship Awards were presented to Covenant Industries Inc. of Louisville and American Auto Body Truck Shops Inc. of Covington.

"Small businesses are the source of innovation and new jobs in our country," said Scott Smith, chief of staff of the Environmental and Public Protection Cabinet. "Both award winners are examples of small businesses that are profitable and taking the initiative to be good stewards of air quality."

Covenant Industries manufactures composite bathtubs and shower enclosures. Company President Larry Riddle developed and implemented a process to produce fiberglass and reinforced plastics that led to the significant reduction of volatile organic carbon/hazardous air pollutant emissions. These emissions decreased from 5 tons per year to less than 1 ton per year, an 80 percent reduction. Covenant Industries was nominated by Cam Metcalf, Kentucky Pollution Prevention Center.

American Auto Body Truck Shop is the largest independent body shop in northern Kentucky. Owned by Greg Schneider, the business does body repair, refinishing, framework repairs on cars,



Scott Smith (left) presents Larry Riddle (center), owner of Covenant Industries Inc., and Terry Riddle with the Small Business Air Quality Stewardship Award. Photo by Millinda Fowles, KBEAP

heavy trucks, school buses, freightliners and boats. Schneider's company received an award for community leadership for arranging a meeting to discuss a new air quality regulation that would substantially affect his business. Auto body equipment specialists, material supply representatives, competitors and regulators attended the meeting to discuss compliance with the new regulation. Clay Redmond, Division for Air Quality Florence Regional Office, and Eric Byrd, Kentucky Business Environmental Assistance Program, nominated Schneider's business.



Drinking water systems receive awards

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Safe Drinking Water Act Excellence Awards

The EPA launched the Safe Drinking Water Act Excellence Awards in 2005 to recognize systems that demonstrate effective operations and maintenance as well as a commitment to maintaining and protecting drinking water and public water supplies. Nominations were solicited in six categories, from small systems serving as few as 25 people up to those serving more than 10,000. Surface water and ground water systems were included.

Lebanon Water Works in central Kentucky won the award in the Medium Surface Water category. The system serves 2,550 connections in the city of

Lebanon and also provides water to Marion County Water District. The water plant treats water from the Rolling Fork River and Fagan Branch Reservoir and can provide up to 5.2 million gallons of water per day. Lebanon has more than 69 miles of distribution lines, three water tanks that can store 3 million gallons and one booster station. The majority of the utility's water meters are now read by radio, and a new Geographic Information System was recently installed.

Carrollton Utilities won in the Medium Ground Water category. It provides water, wastewater and natural gas service to the city of Carrollton and to surrounding areas of Carroll County in

northern Kentucky. Carrollton's water plant treats ground water from three wells at a capacity of 1.5 million gallons per day and distributes that water to two storage tanks. There are 37 miles of mains that serve more than 1,590 customers with an additional 954 customers in the county.

Simpson County Water District won an award from the EPA for providing an outstanding Consumer Confidence Report to its customers. The water district, in southcentral Kentucky, won in the Medium Surface Water category. The system purchases water from Whitehouse, Tenn., and distributes it to approximately 9,100 people.



District assists landowners with stream bank erosion

By Debra Hinton
Division of Conservation

"I have moved the fence three times this year alone and may be moving it again if we get another big rain," said Jerry Gray, a McCracken County landowner. "I just keep losing more and more farm land."

What started out as one landowner visiting the McCracken County Conservation District office concerned about losing farmland to stream bank erosion, has brought many similar landowners seeking the same assistance.

Gray brought in pictures showing erosion of stream banks eating away his farmland. Natural Resource Conservation Service (NRCS) District Conservationist John Shely has heard this story for more than 10 years from various landowners.

The McCracken County Conservation District Board of Supervisors places high priority on stream problems and has established a local cost share program to assist landowners in clearing drifts and working on stream bank erosion.

An environmental grant from the Kentucky Soil and Water Conservation Commission state cost share program for innovative engineering practices has been implemented to correct and save stream banks. Three landowners are participating and have received assistance from the McCracken County Conservation District to correct their problems. The demonstration project attempts to show that instead of rip rapping an entire stream bank, it may be better to work with the stream and

not against it. The project is also wildlife friendly.

With assistance from the Kentucky Soil and Water Commission state cost share program, Environmental Quality Incentives Program (EQIP) and the local cost share program, landowners have begun to see progress in saving their farmland.

During 2005, seven landowners were funded through EQIP and state cost share to address stream bank erosion. The McCracken County Conservation District is working to assist landowners with this problem and hopes that more engineers and landowners will see that innovative approaches to solving problems will be forthcoming.



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